

CSE341 Theory Assignment 02

Total Marks - 20

1. For the following set of instructions find the values of the status flags (ZF, SF, PF, AF, CF, OF): **[Marks - 2x2.5 = 5]**

i)

```
MOV AX, 4B35h
MOV CX, CC74h
ADD AX, CX
```

ii)

```
MOV AX, 7E40h
MOV BX, 3BC0h
ADD AX, BX
```

2. MOV AX, 2FXYh **[Marks - 4x1.25 = 5]**
MOV BX, FCFDh
ADD AX, BX

Find :

- i) Given PF = 0 & AF = 1 , **Maximum** value for XY
- ii) Given PF = 1 & AF = 1 , **Minimum** value for XY
- iii) Given PF = 1 & AF = 0 , **Minimum** value for XY
- iv) Given PF = 1, **Maximum** value of X and **minimum** value of Y

3. Write the equivalent instruction for the following machine code. **[Marks - 2x1.25 = 2.5]**
- i) 891Ah
 - ii) 88CFh

4. Write the equivalent machine code in hexadecimal for the following instruction and state the length in byte . **[Marks - 2x1.25 = 2.5]**
- i) MOV CL, [BX]
 - ii) MOV [1246h],[2423h]

5. [Marks - 3x1 = 3]

Address	30300h	30301h	30700h	30701h	42500h	42501h	52700h	52701h
Data	23h	12h	51h	76h	11h	32h	91h	47h

Given DS = 3000h, SS = 5000h, CS = 1000h, BP = 0500h, SI = 0200h ,
DI = 0300h

Find the value stored in the register:

- i) MOV AX, [SI+ BP]
- ii) MOV BL, [BP+SI+2000h]
- iii) MOV DH, [DI]

6. Draw the internal architecture of the 8086 microprocessor with proper labels. [Marks - 2]